# SUMMIT™ 450 & 650
## LP Gas Barbecues
## Step-By-Step Guide

**⚠DANGER**

**If you smell gas:**
**1. Shut off gas to the appliance.**
**2. Extinguish any open flames.**
**3. Open lid**
**4. If odor continues, keep away from the appliance and immediately call your gas supplier or your fire department.**
**Leaking gas may cause a fire or explosion which can cause serious bodily injury or death, or damage to property.**

**⚠WARNING:**

**1. Do not store spare liquid propane cylinder within 10 feet (3m) of this appliance.**
**2. Do not store or use gasoline or other flammable liquids or vapors within 25 feet (8m) of this appliance.**

**⚠WARNING: Follow all leak-check procedures carefully in this manual prior to barbecue operation. Do this even if the barbecue was dealer-assembled.**

**NOTICE TO INSTALLER: These instructions must be left with the owner and the owner should keep them for future use.**
**THIS GAS APPLIANCE IS DESIGNED FOR**

**OUTDOOR USE ONLY.OUTDOOR USE ONLY.**

**⚠ WARNING: Do not try to light this appliance without reading the "Lighting" Instructions section of this manual**

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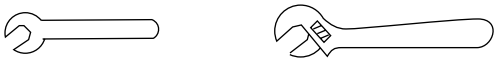
# TOOLS NEEDED

7/16 inch open end or an adjustable wrench



# SUPPLIES NEEDED

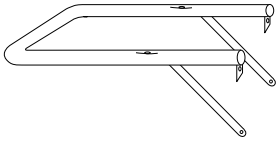
You will need a soap and water solution to check for gas leaks. (See Step "Check for gas leaks.")

*Note - The hardware size of nuts, bolts and screws is given. For example "1/4-20 x 2 inch bolt" means a bolt 1/4 inch in diameter with 20 threads to the inch, 2 inches long. On a small screw for example, "6-32 x 1/2 inch screw" means a number 6 screw, with 32 threads to the inch, 1/2 inch long.*

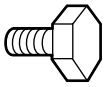
**Note: Remove all packaging materials from the barbecue, the front, back sides, inside the barbecue cart, and the bottom shipping platform. Once the packaging material is removed, carefully roll the barbecue off the shipping platform and lock the casters.**

# CONTINUE TO REMOVE PACKAGED CONTENTS

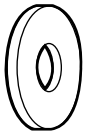
"U" rails (2)



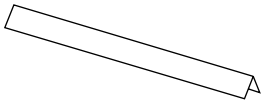
1/2 inch bolts
(1/4-20 x 1/2 inch bolts) (8)



Nylon washer (8)

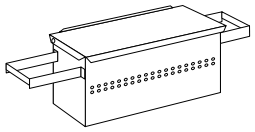


Flavorizer bars
Summit 450 (7)
Summit 650 (11)

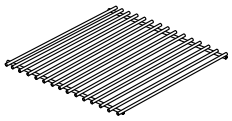


Steam-N-Chips Smoker

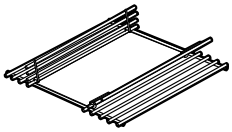
*Note: If you use the Steam-N-Chips Smoker, you will be removing one of the Flavorizer bars. You have a full set of Flavorizer bars to use when not using the Steam-N-Chips smoker.*



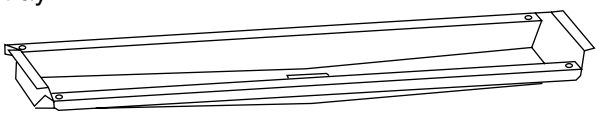
Cooking grate
Summit 450 (1)
Summit 650 (2)



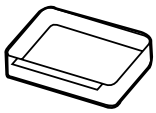
Hinged cooking grate



Bottom tray

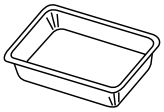


Catch pan



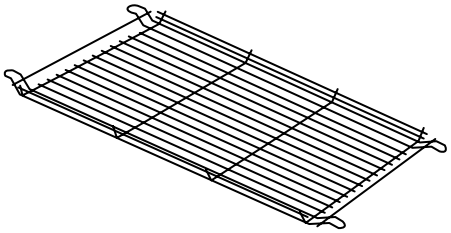
Catch pan holder

Disposable drip pan

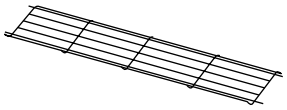


# REMOVE PACKAGED CONTENTS (CONTINUED)

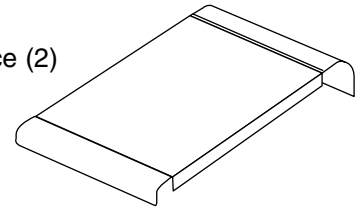
Bottom shelf



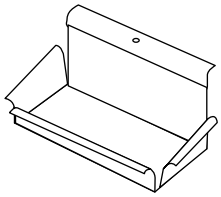
Warm-up basket



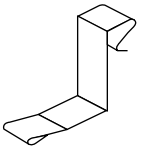
Stainless steel work surface (2)



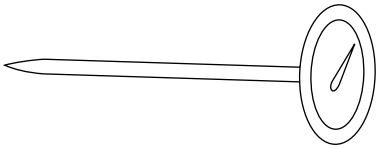
Condiment holder (2)



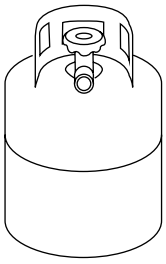
Tool holder (4)



Thermometer



Cylinder hanger



1/4-20 wing nuts (4)

# INSTALL “U” RAILS

*Note: lock the casters before starting assembly.*

You will need: two “U” rails, eight 1/4-20 x 1/2 inch bolts, eight nylon washers, and a 7/16 inch or adjustable wrench.

Insert the tabs of the “U” rail into the frame rails. Make sure both tabs are inside the frame rails. Figure 1(a) and that the “U” rail supports are outside of the “U” rail support mounts. Figure 1(a).

Push the “U” rail down into place on top of the frame rail. Add a nylon washer to a bolt and start the bolt through the hole of the frame rail into the tab of the “U” rail. Only start the two bolts. Figure 1(b).

Align the holes of the “U” rail support with the holes in the “U” rail support mount. Add a washer to a bolt and start the bolt through the “U” rail support and into the “U” rail support mount. Figure 1(b). Only start the two bolts.

Once you have started the four bolts per side, use the 7/16 inch or adjustable wrench to tighten the four bolts on each side of the barbecue.

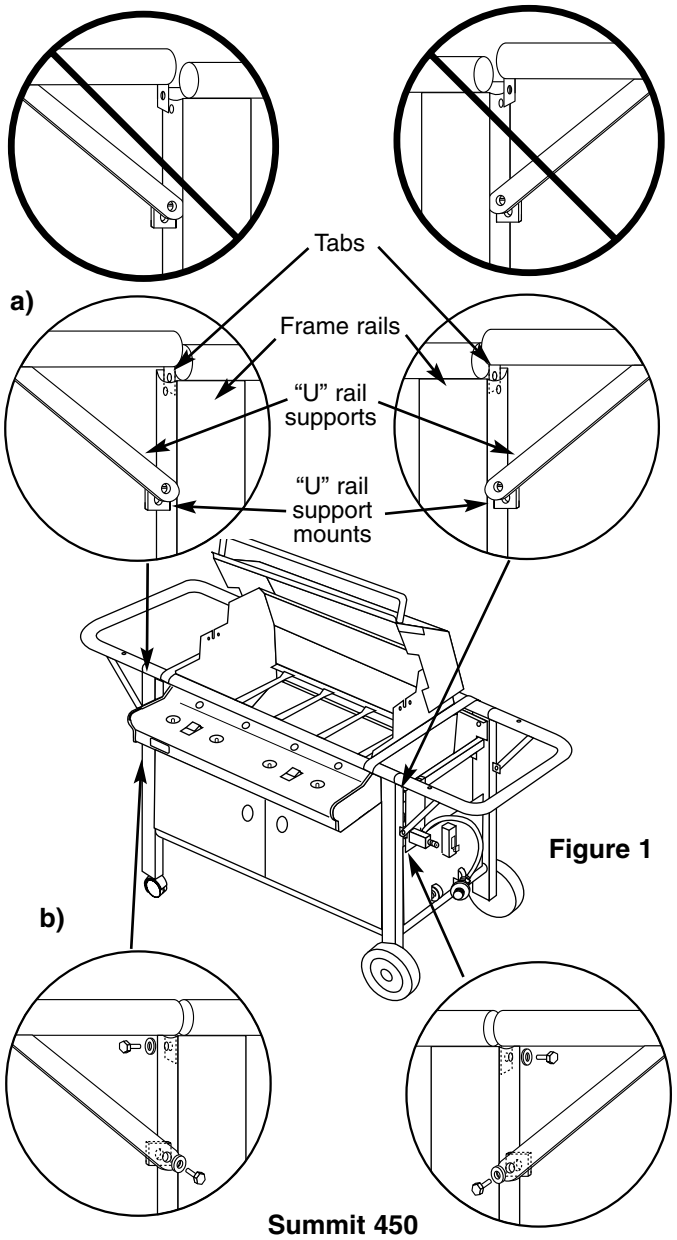



Figure 1

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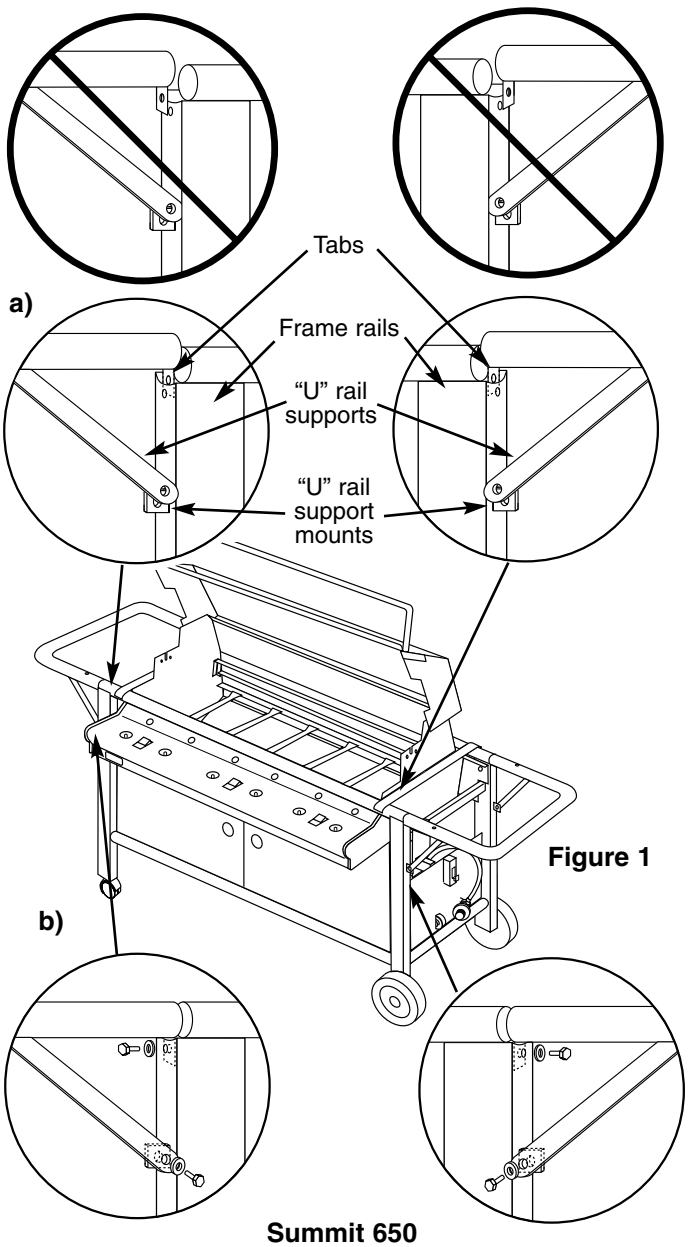


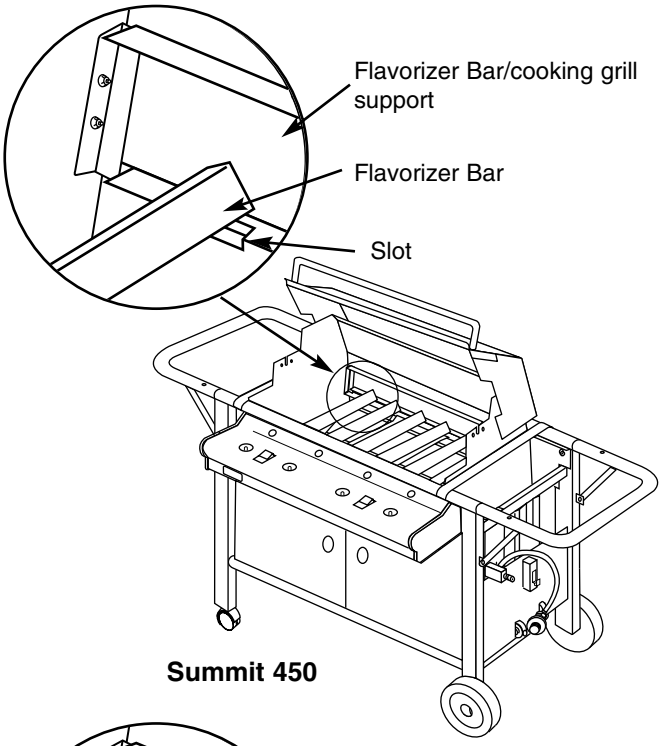

Figure 1

Summit 650

# INSTALL FLAVORIZER BARS

You will need: seven Flavorizer bars.

Set the Flavorizer bars front to back over the burners in the slots of the Flavorizer Bar/cooking grill support..

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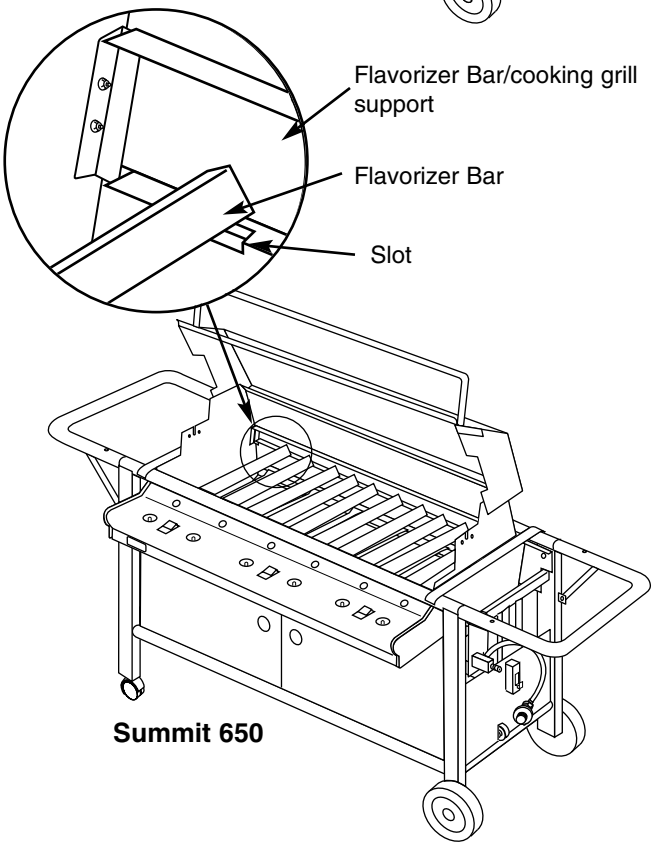


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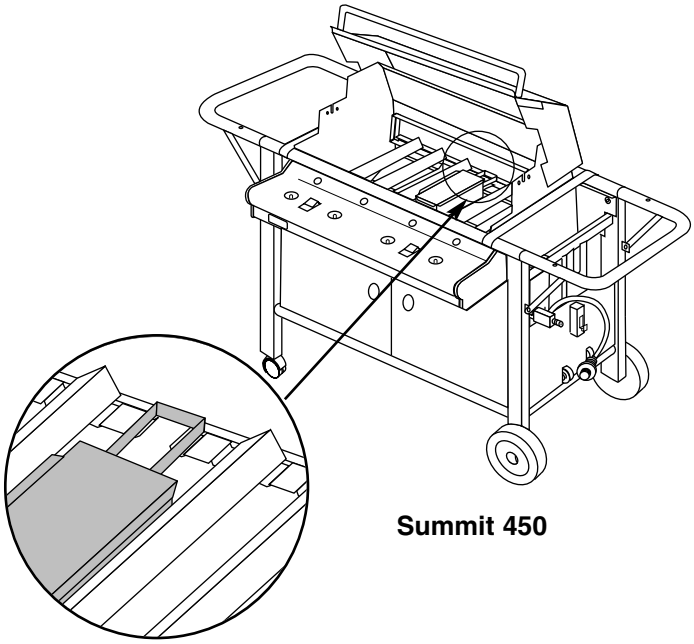
# INSTALL STEAM-N-CHIPS SMOKER

You will need: smoker box.

Remove the center Flavorizer bar (the one that is not over a burner). Set the handles of the Steam-N-Chips smoker on the Flavorizer bar holder.

*Note: For directions on how to use the Steam-N-Chips smoker, see the Operating Guide.*



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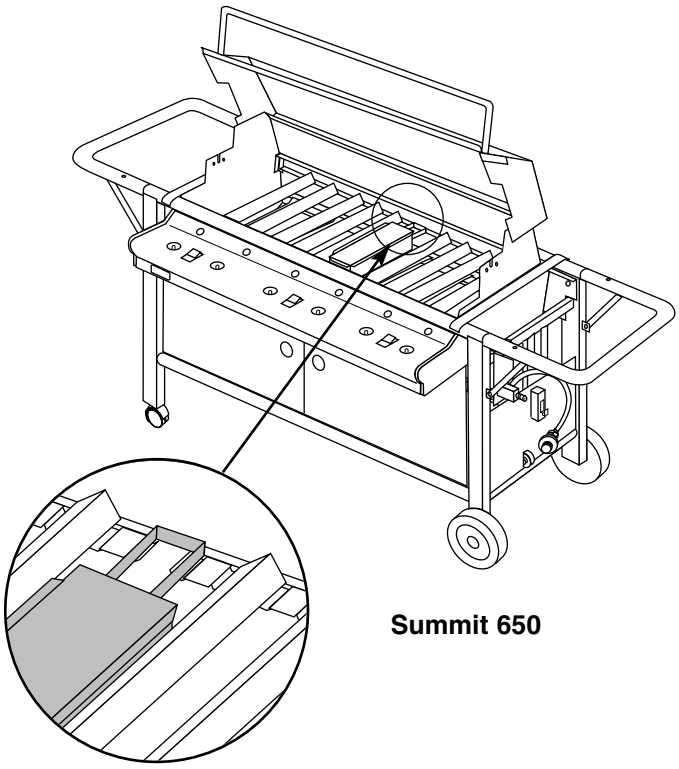

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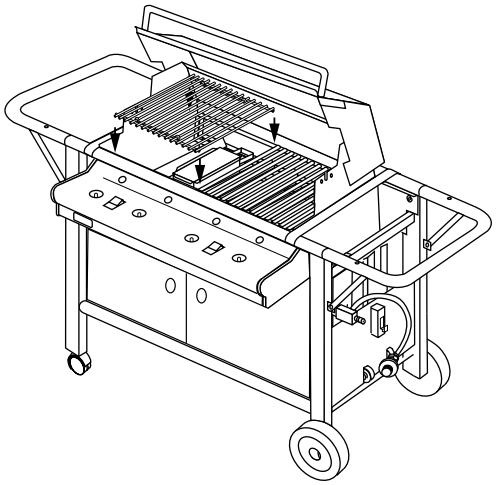
# ADD COOKING GRATES

You will need: (1) cooking grate and (1) Hinged Cooking Grate .

The cross-rail of the cooking grate goes down. Set the cooking grates in place next to each other.



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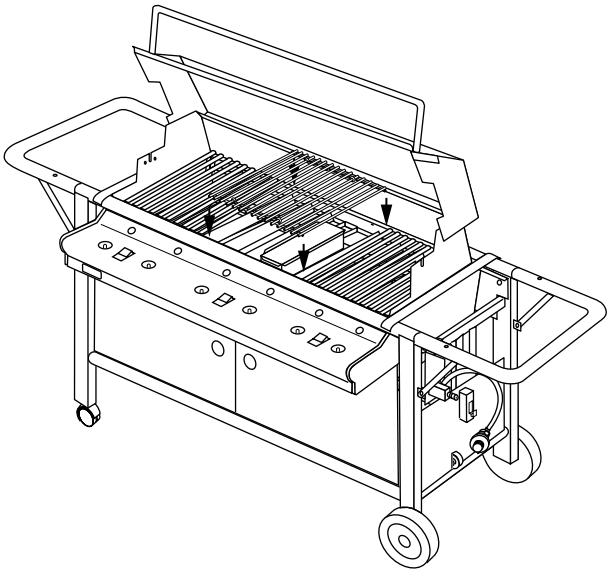

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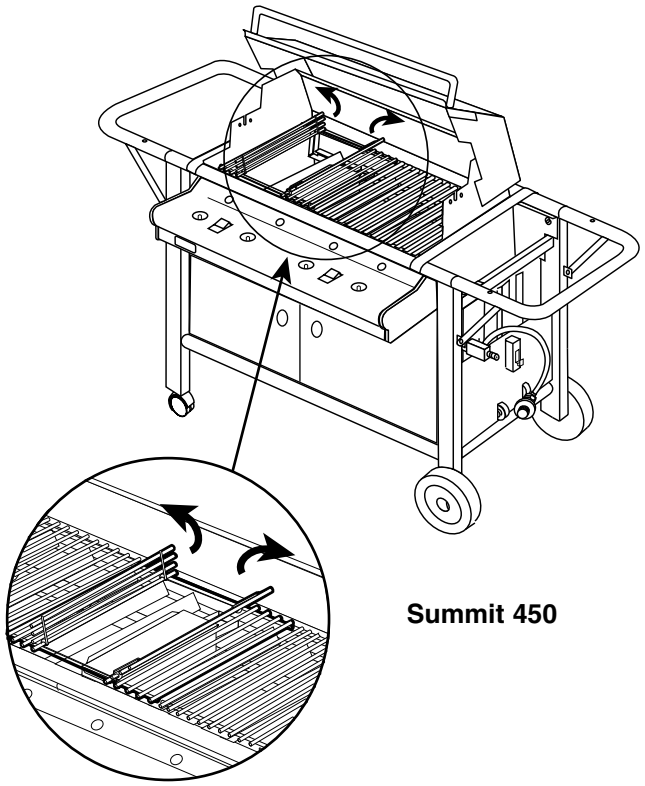
**⚠WARNING: Use heat-resistant barbecue mitts or gloves when adding wood to the Steam-N-Chips Smoker.**

Use a barbecue tool to swing open the hinged portions of the cooking grate.



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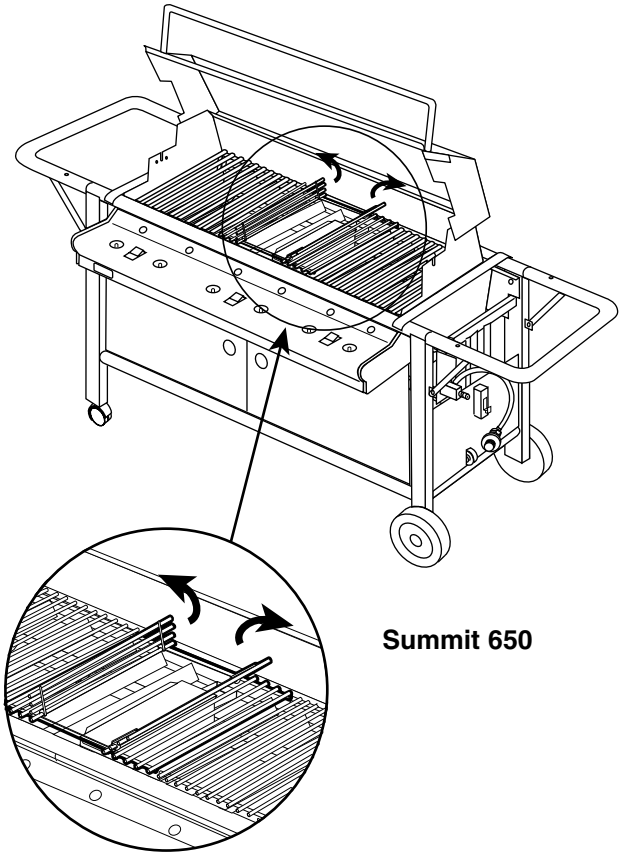
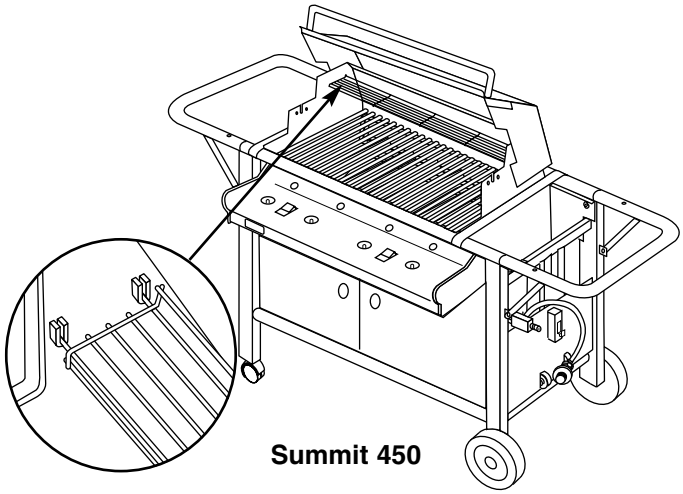


**Summit 650**

# INSTALL WARM-UP BASKET

You will need: warm-up basket.

Install one end of the warm-up basket into the hole on the right end of the lid and the other end into the slot in the left end of the lid.



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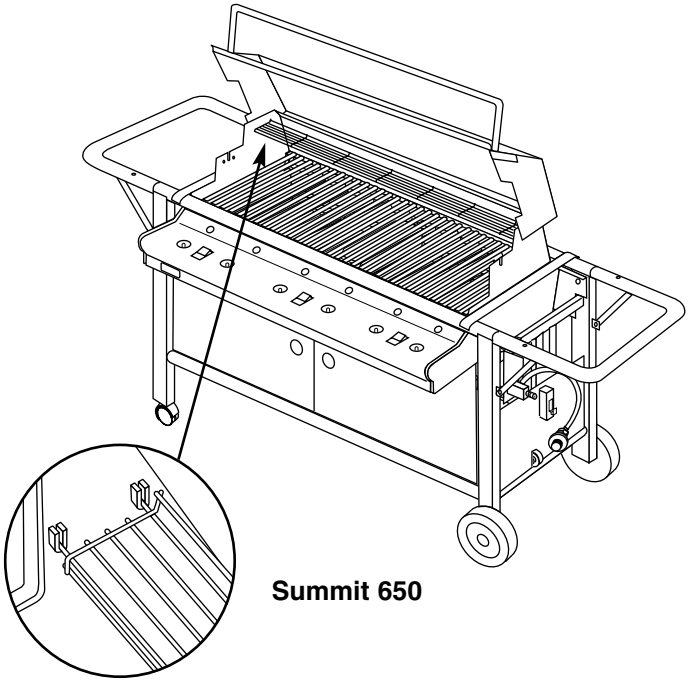

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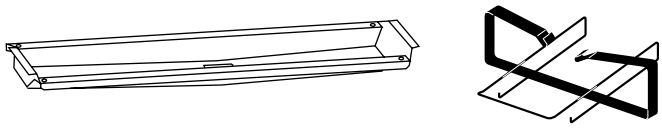
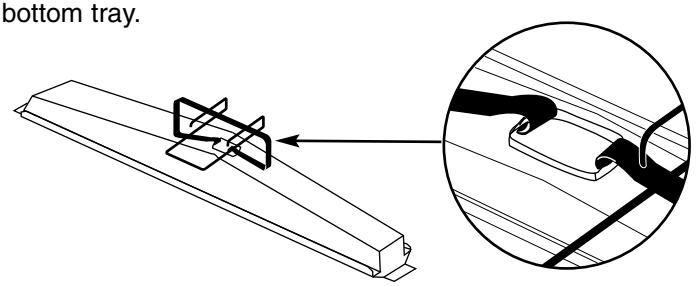
# INSTALL BOTTOM TRAY

You will need: Bottom tray, catch pan holder, catch pan, and one drip pan.



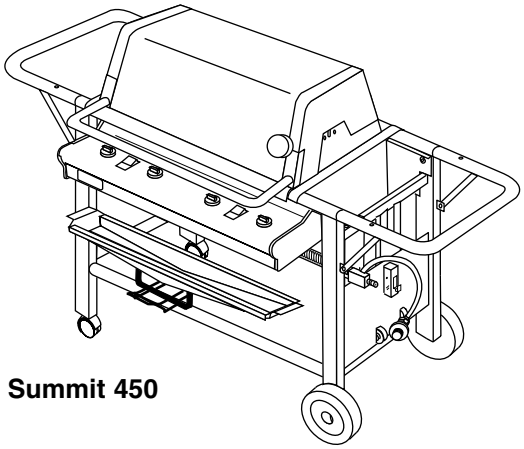
*Note: It may be easier to install the catch pan holder by removing the catch pan from the holder.*

Hook the ends of the catch pan holder into the hole in the bottom tray.



Slide the bottom tray into the mounting slots under the bottom of the cooking box with the finger grip of the catch pan toward you.

**⚠CAUTION: Do not line the bottom tray with aluminum foil. It can cause grease fires by trapping the grease and not allowing grease to flow into the catch pan.**



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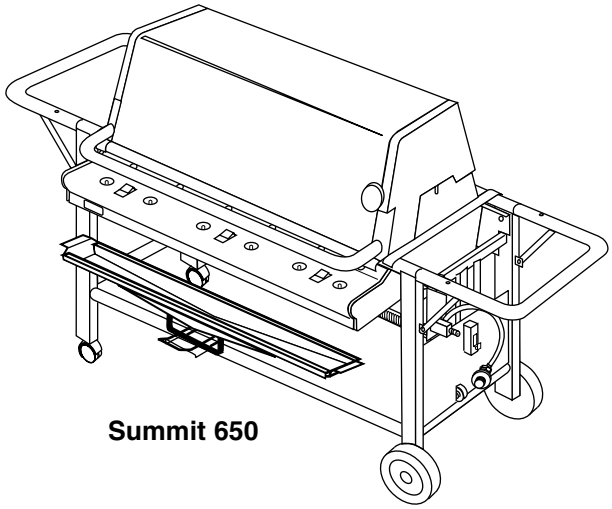

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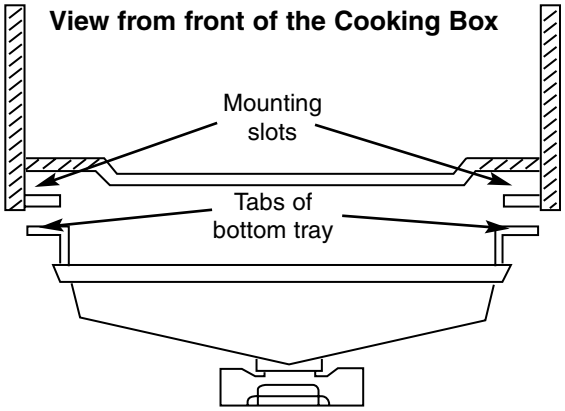
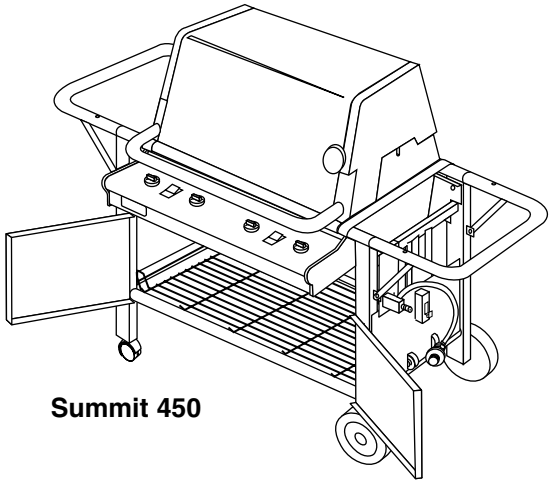



Put the foil drip pan into the catch pan.

# INSTALL BOTTOM SHELF

Place the bottomshelf under the cart between the frame supports. Lift up one end of the shelf so it clears the crosspiece. Continue to lift until the opposite end clears the opposite crosspiece. Set the shelf in place on both crosspieces.



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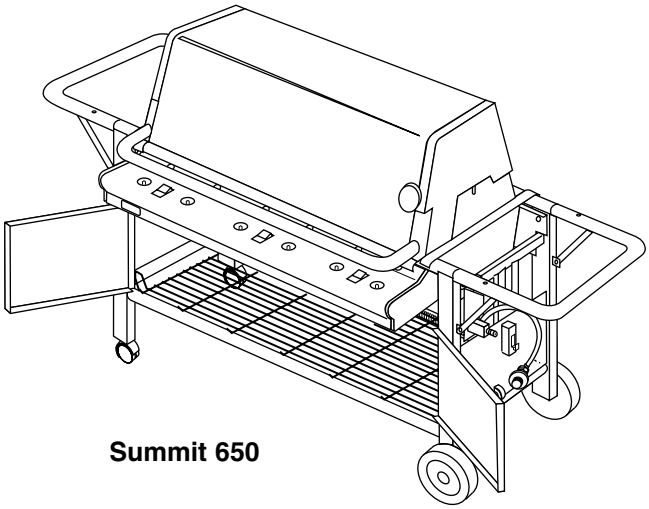


**Summit 650**

# INSTALL CONDIMENT HOLDERS AND WORK SURFACES

You will need: two condiment holders, two stainless steel work surfaces, and four wing nuts.

Place the condiment holders on the left and right side of the frame. Figure 11(a). Set the work surfaces over the condiment holders on both sides of the barbecue. The studs of the work surface go through the holes in the top of the condiment holder and through the frame rail. Thread on the wing nuts on the front and back and tighten. Figure 11(b).

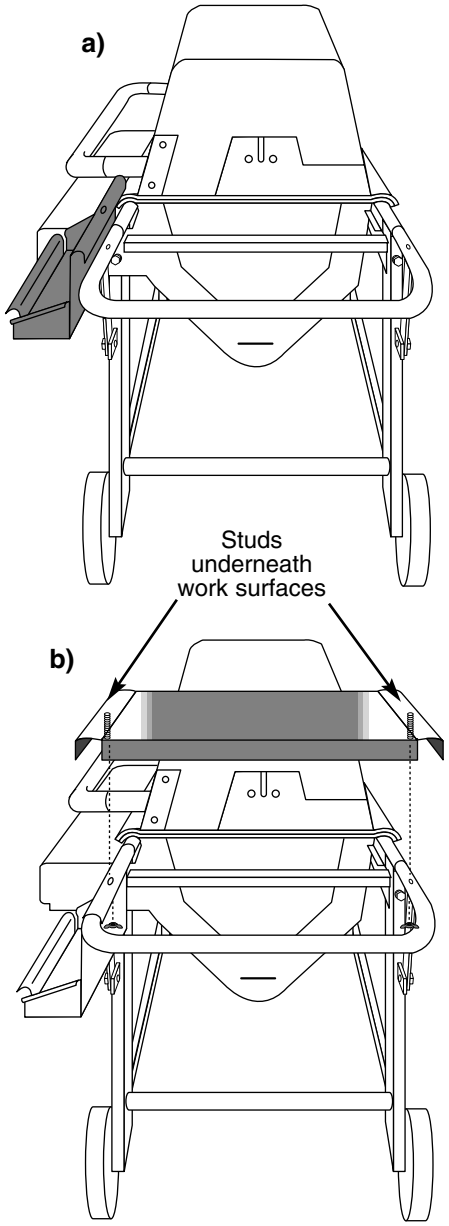



**Figure 11**

# FILL LIQUID PROPANE CYLINDER

*Note - The liquid propane cylinder manufacturer is responsible for the materials, workmanship and performance of the cylinder. If the cylinder has a defect, malfunctions, or you have a question regarding the cylinder, call the cylinder manufacturer's customer service center. The phone number is on the warning decal, which is permanently attached to the cylinder. If the cylinder manufacturer has not resolved the issue to your satisfaction, then contact the Customer Service Representative in your region using the contact information sheet provided with your manual.*

To fill, take the liquid propane cylinder and filler adapter to an RV center or look up gas-propane in the phone book for other sources of liquid propane gas.

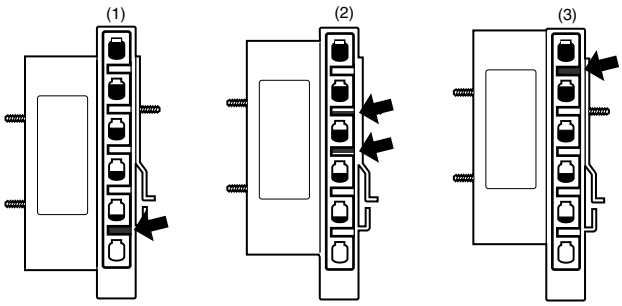
**⚠ WARNING: We recommend that your liquid propane cylinder be filled at an authorized liquid propane gas dealer by a qualified attendant, who fills the tank by weight.**
**IMPROPER FILLING IS DANGEROUS.**

Tell your liquid propane dealer that this is a new liquid propane cylinder. The air must be removed from a new liquid propane cylinder before the initial filling. Your liquid propane cylinder dealer is equipped to do this.
The liquid propane cylinder must be installed, transported and stored in an upright position, and should not be dropped or handled roughly.
Never store or transport the liquid propane cylinder where temperatures can reach 125° Fahrenheit (too hot to hold by hand – for example: do not leave the liquid propane cylinder in a car on a hot day).
For full instructions on safe handling of liquid propane cylinders, see Section "Operating".

# CHECKING THE FUEL LEVEL IN YOUR TANK

**Check the fuel level by viewing the color indicator level line on the side of the tank scale.**

**1) Empty**
**2) Medium**
**3) Full**



# IMPORTANT LP CYLINDER INFORMATION

Failure to follow these **DANGER** statements exactly may result in a fire causing death or serious injury.

**⚠DANGER**

**⚠NEVER store a spare LP Cylinder under or near this barbecue.**

**⚠NEVER fill the tank beyond 80% full.**

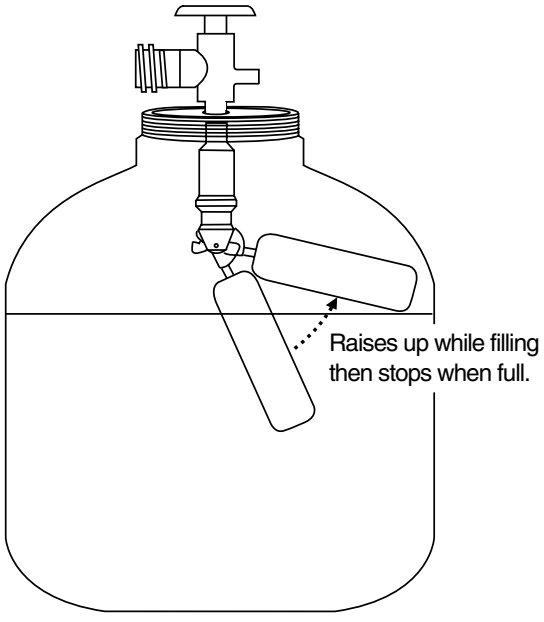
**Your Weber gas grill is equipped with a cylinder supply system designed for vapor withdrawal.**

**⚠WARNING: Only use this grill outdoors in a well-ventilated area. Do not use in a garage, building, breezeway or any other enclosed area.**

**The LP cylinder supplied with your barbecue is equipped with an OPD (Overfilling Prevention Device) and a QCC1 or Type 1 (CGA810) cylinder connection. The cylinder connection is compatible with the barbecue connection.**

This is a secondary device to prevent the overfilling of your LP cylinder. The proper filling methods for the filling of your cylinder are by weight or volume, as described in NFPA 58. Please make sure your filling station fills your LP cylinder by weight or volume. Ask your filling station to read purging and filling instructions on the LP cylinder before attempting to fill.

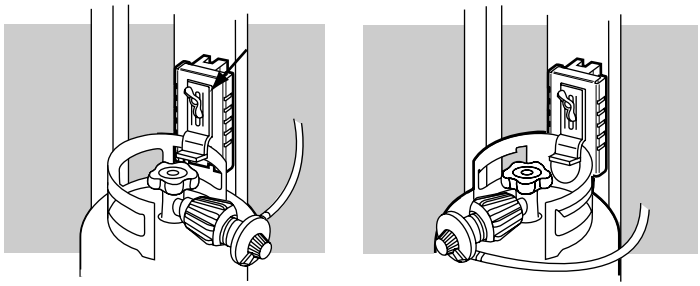
**⚠WARNING: Do not exchange the LP tank provided with your barbecue, unless the exchange LP tank is equipped with an OPD. Otherwise you will lose the OPD (Overfilling Prevention Device) feature. If there is not an LP tank available for exchange equipped with an OPD, we recommend that you have your LP tank filled at an authorized LP gas dealer by a qualified attendant.**




# CONNECT FILLED LIQUID PROPANE CYLINDER

**⚠ WARNING: Make sure that the cylinder valve is closed. Close by turning clockwise.**

We utilize various LP tank manufacturers. Some of the tanks have differing top collar assembles. (The top collar is the metal protective ring around the valve.) One series of tanks mount with the valve facing front. The other tanks mount with the valve facing away from the fuel scale. These types of tanks are illustrated below.



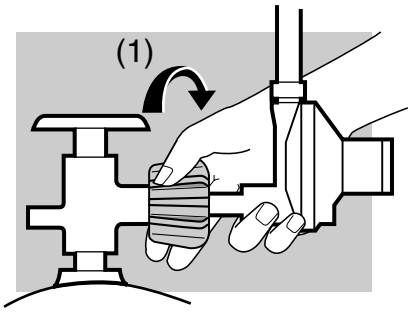
Hook the liquid propane cylinder onto the fuel gauge. Loosen the cylinder lock wing nut. Swing the cylinder lock down. Tighten the wing nut.

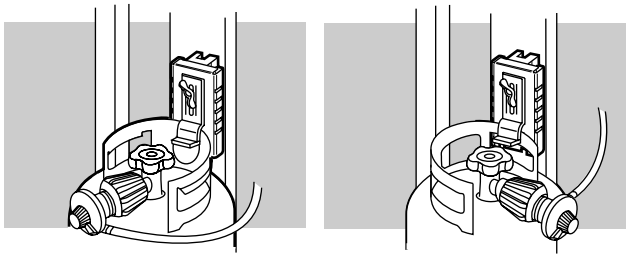
Remove plastic dust cover from the fuel cylinder valve.

Screw the regulator coupling onto the cylinder valve(1), clockwise, or to the right. Hand tighten only.

Note: This is a new type of connection. It tightens clockwise and will not allow gas to flow unless the connection is tight. The connection requires tightening by hand only.

**⚠ WARNING: Do not use a wrench to tighten the connection. Using a wrench could damage the regulator coupling and could cause a gas leak.**



# SAFE HANDLING TIPS FOR LIQUID PROPANE GAS CYLINDERS

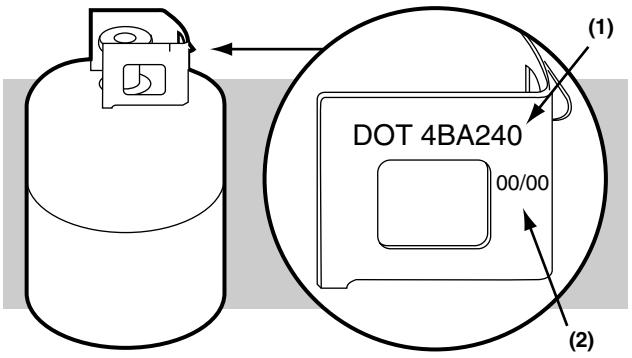
- Liquid Propane (LP) gas is a petroleum product as are gasoline and natural gas. LP gas is a gas at regular temperatures and pressures. Under moderate pressure, inside a cylinder, LP gas is a liquid. As the pressure is released, the liquid readily vaporizes and becomes gas.
- LP gas has an odor similar to natural gas. You should be aware of this odor.
- LP gas is heavier than air. Leaking LP gas may collect in low areas and prevent dispersion.
- To fill, take the LP cylinder to an RV center, or look up "gas-propane" in the phone book for other sources of LP gas.
- **⚠WARNING: We recommend that your LP cylinder be filled at an authorized LP gas dealer, by a qualified attendant, who fills the tank by weight. IMPROPER FILLING IS DANGEROUS.**
- **⚠WARNING: If you exchange your LP cylinder, make sure you get a similar tank in return. Your LP cylinder is equipped with a quick closing coupling or type 1 valve and an OPD (Overfilling Prevention Device). Other LP cylinders may not be compatible with your barbecue connection.**
- Air must be removed from a new LP cylinder before the initial filling. Your LP dealer is equipped to do this.
- The LP cylinder must be installed, transported and stored in an upright position. LP cylinders should not be dropped or handled roughly.
- Never store or transport the LP cylinder where temperatures can reach 125° F (too hot to hold by hand - for example: do not leave the LP cylinder in a car on a hot day).

*Note - A refill will last about 20 hours of cooking time at normal use. The fuel scale will indicate the propane supply so you can refill before running out. You do not have to run out before you refill.*

- Treat "empty" LP cylinders with the same care as when full. Even when the LP tank is empty of liquid there still may be gas pressure in the cylinder. Always close the cylinder valve before disconnecting.
- **⚠CAUTION: When transporting the LP cylinder make sure the plastic dust cover is in place over the valve. This will keep dust and dirt from the threaded portion of the valve.**
- Do not use a damaged LP cylinder. Dented or rusty LP cylinders or LP cylinders with a damaged valve may be hazardous and should be replaced with a new one immediately.

**Liquid Propane (LP) Cylinder(s)**

- The joint where the hose connects to the LP cylinder must be leak tested each time the LP cylinder is reconnected. For example, test each time the LP cylinder is refilled.
- Be sure the regulator is mounted with the small vent hole pointed downward so that it will not collect water. This vent should be free of dirt, grease, bugs etc.
- The LP cylinder and connections supplied with your Weber Gas Barbecue have been designed and tested to meet government, American Gas Association, and Underwriters Laboratories requirements.




**Liquid Propane Cylinder requirements**

- Replacement LP cylinders supplied by Weber satisfy the above requirements. Check to be sure other cylinders have a D.O.T. certification(1), and date tested(2) is within five years. Your LP gas supplier can do this for you.

**If you have questions about spare LP cylinders contact the Customer Service Representative in your region using the contact information sheet provided with your manual.**

- All LP tank supply systems must include a collar to protect the cylinder valve.
- The LP cylinder must be a 20-lb. size (18 1/4 inches high, 12 1/4 inches in diameter).
- The LP cylinder must be constructed and marked in accordance with the specifications for LP gas cylinders of the U.S. Department of Transportation (D.O.T.).

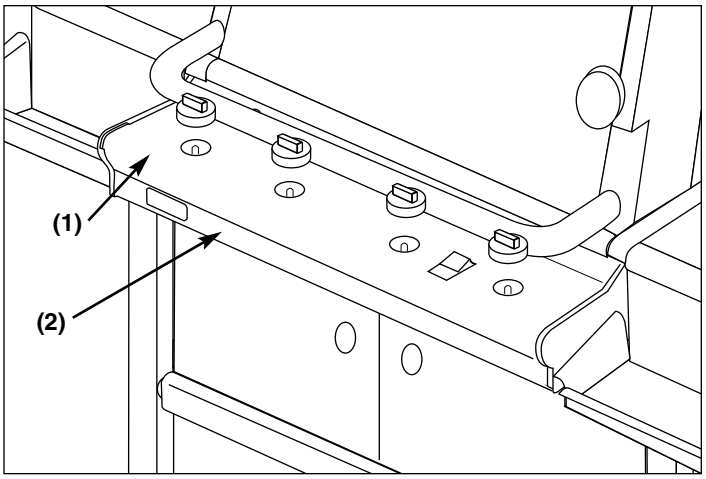
# CHECK FOR GAS LEAKS

**⚠ WARNING**

**The gas connections of your Weber Gas Barbecue have been factory tested. We do however recommend that you leak check all gas connections before operating your Weber Gas Barbecue.**

### Remove burner control knobs, control panel(1) and front panel(2)

Remove the burner control knobs. The control panel(1) is separate from the front panel(2). The control panel needs to be removed before the front panel can be removed.

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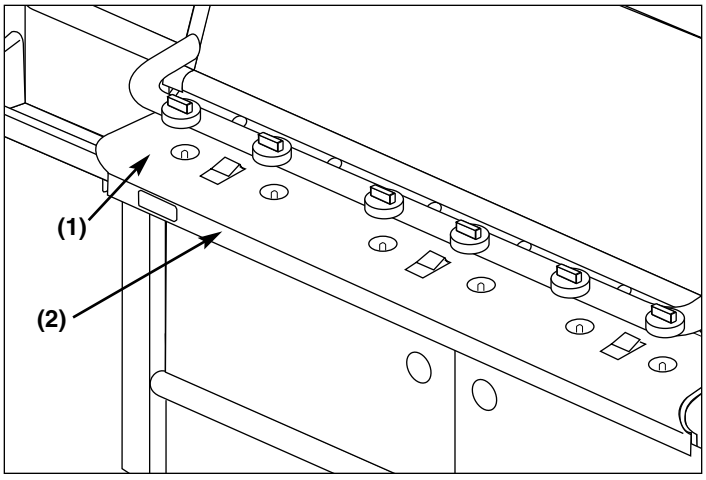


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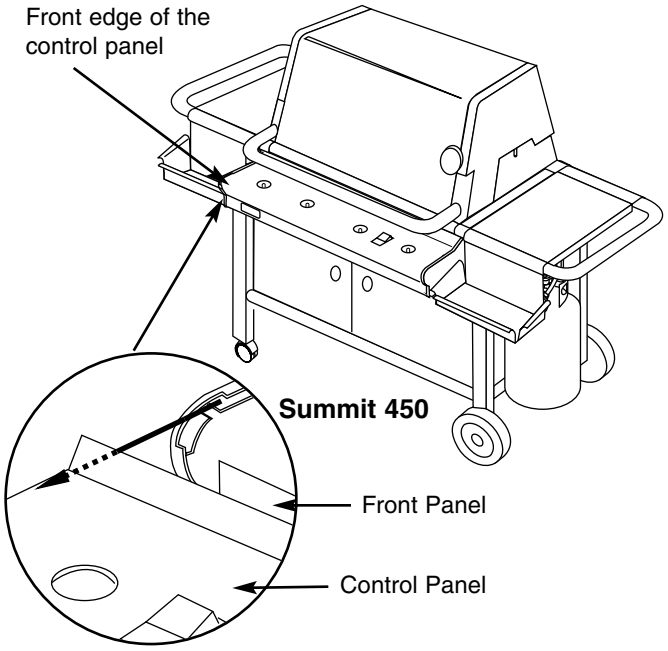
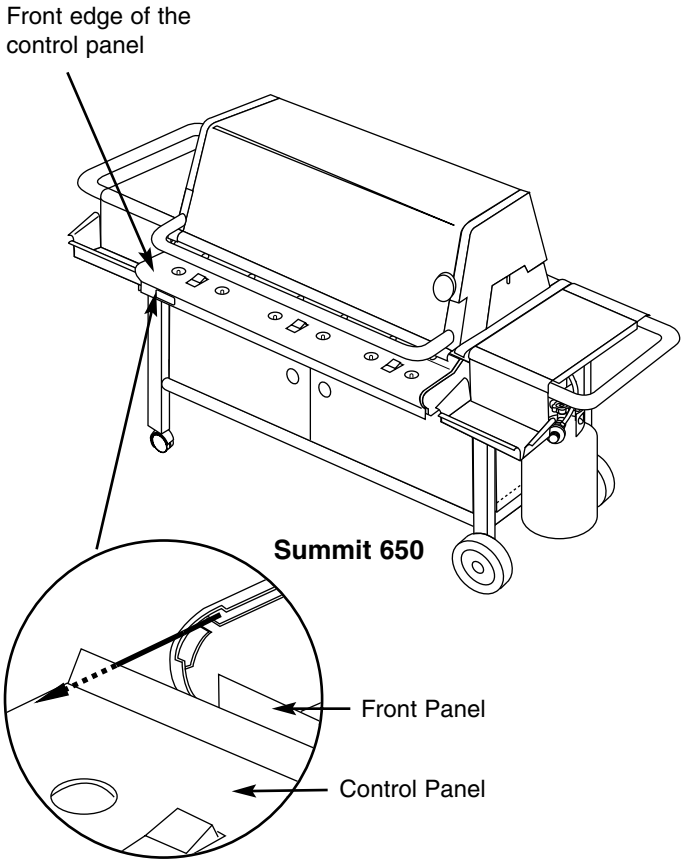
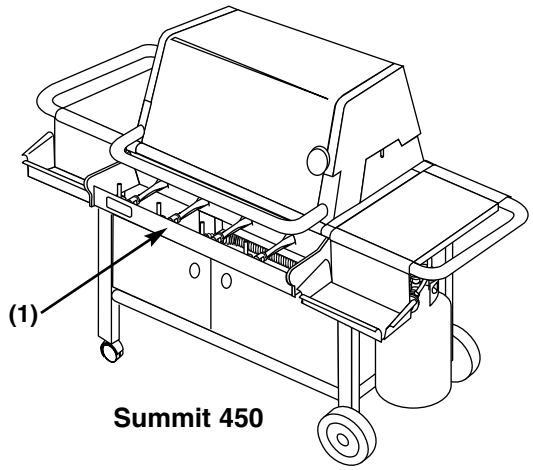
Put your fingers under the front edge of the control panel and lift up and pull evenly toward you.



Pull the front panel(1) up and out of the cooking box assembly.

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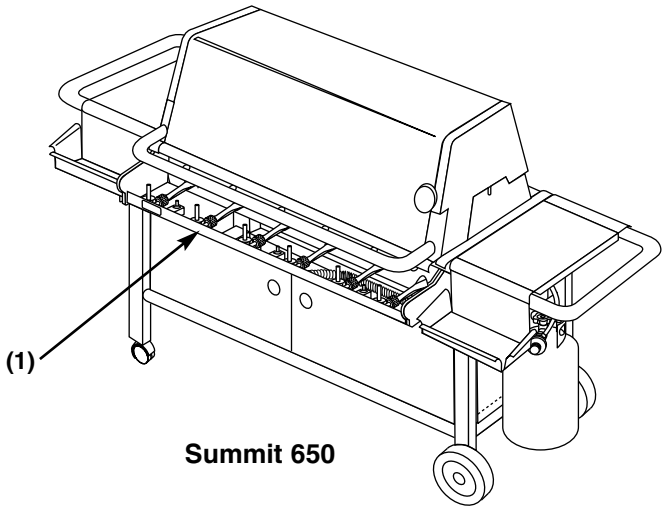


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# CHECK FOR GAS LEAKS (CONTINUED)

**⚠ DANGER**

**Do not use an open flame to check for gas leaks. Be sure there are no sparks or open flames in the area while you check for leaks. This will result in a fire or explosion which can cause serious bodily injury or death and damage to property.**

**⚠WARNING: You should check for gas leaks every time you disconnect and reconnect a gas fitting.**

You will need: a soap and water solution and a rag or brush to apply it.

*Note: Since some leak test solutions, including soap and water, may be slightly corrosive, all connections should be rinsed with water after checking for leaks.*

**⚠WARNING: Make sure all burner control knobs are in the OFF position, including the side burner, if the barbecue has a side burner.**

Turn on gas supply by turning the tank valve handwheel counterclockwise.

Check for leaks by wetting the connections with the soap and water solution and watching for bubbles. If bubbles form or if a bubble grows there is a leak.

**⚠WARNING: Do not ignite burners while checking for leaks.**

Check:

a) Left valves to manifold connection. Figure 19 (a).

b) Right valves to manifold connection. Figure 19 (b).

c) Gas line to manifold connection. Figure 19 (c)

**⚠WARNING: If there is a leak at connection 19 (c) turn OFF the gas and retighten the fitting with a wrench and recheck for leaks with soap and water solution.**

**If a leak persists after retightening the fitting, turn OFF the gas. DO NOT OPERATE THE BARBECUE. Contact your dealer.**

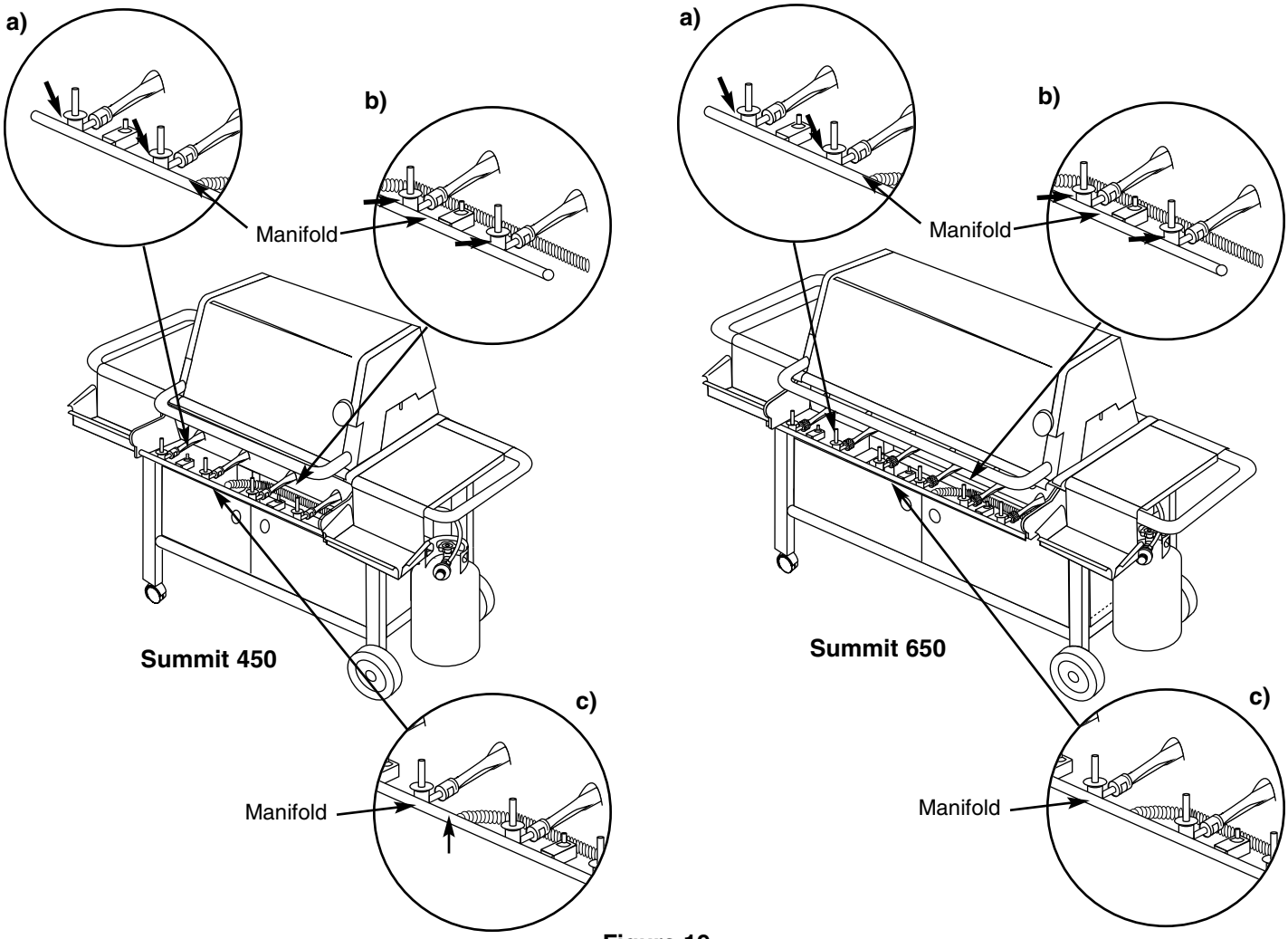


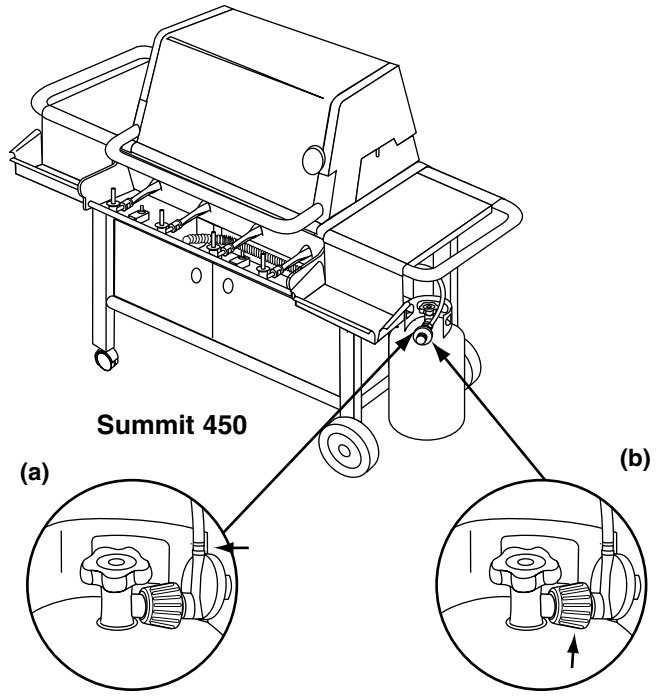

**Figure 19**

a) Hose to regulator connection. Figure 20 (a).

b) Regulator to tank connection. Figure 20 (b).

**⚠WARNING: If there is a leak at connections 19 (a), 19 (b), 20 (a), or 20 (b) turn OFF the gas. Do not operate the barbecue. Contact your dealer.**

When leak checks are complete, turn gas supply OFF at the source and rinse connections with water.



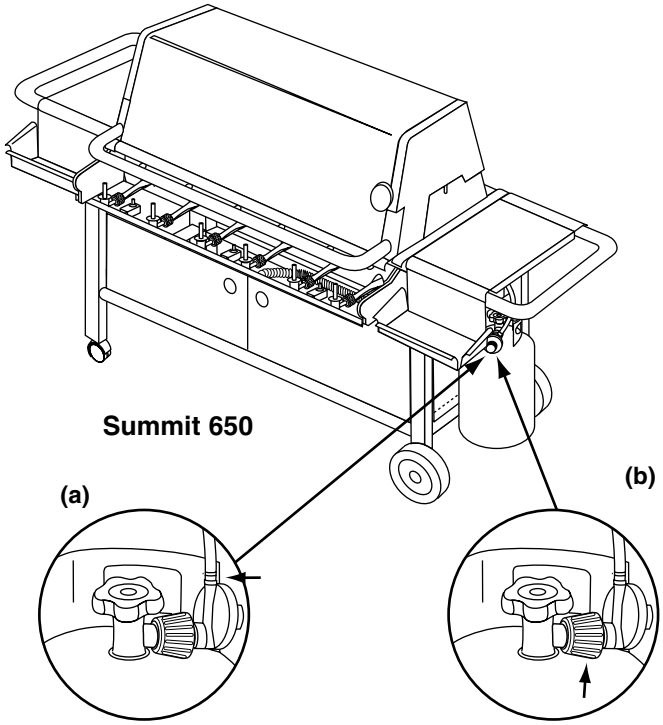
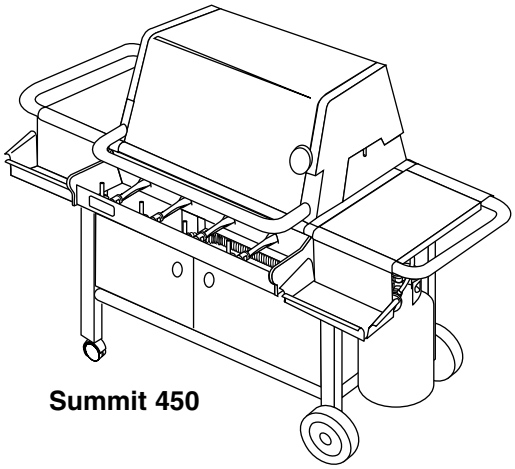



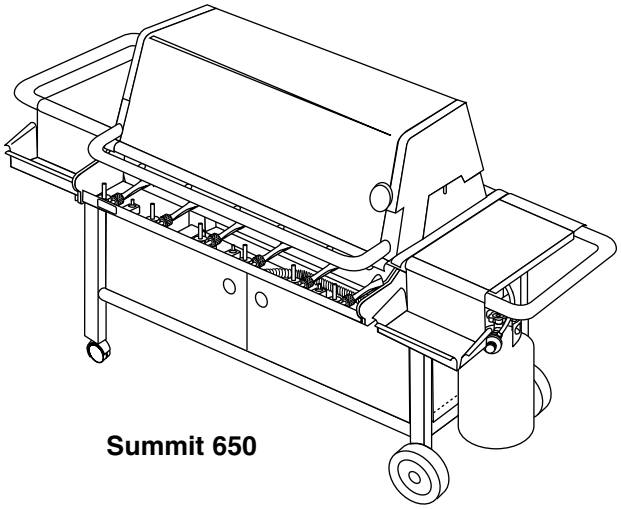

**Figure 20**

# REINSTALL FRONT PANEL

You will need: front panel.

With the Weber logo to the left, slide front panel down into place.



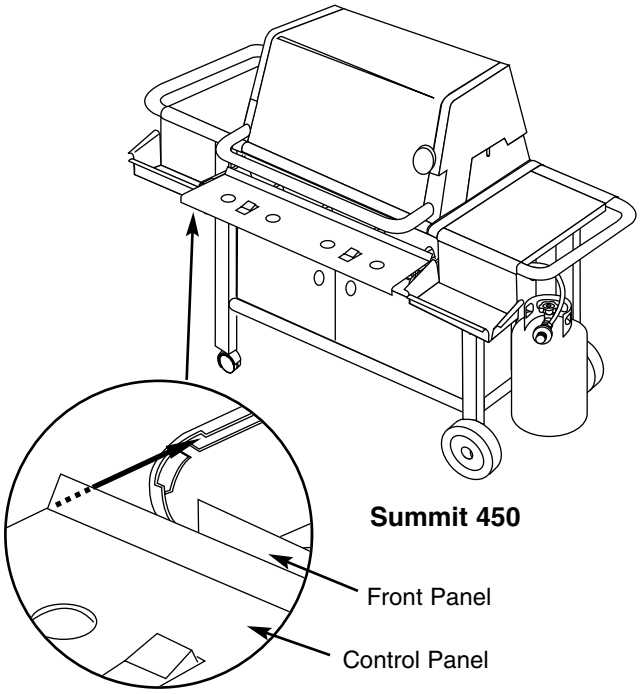



# REINSTALL CONTROL PANEL

You will need: control panel.

Pull igniter buttons up until they stay in the up position. Place the control panel into the grooves on either side of the front of the cooking box. Push the control panel into place, using even pressure while pushing.

Use your fingers to lift the front edge of the control panel slightly and set it into the recess on both sides of the cooking box.

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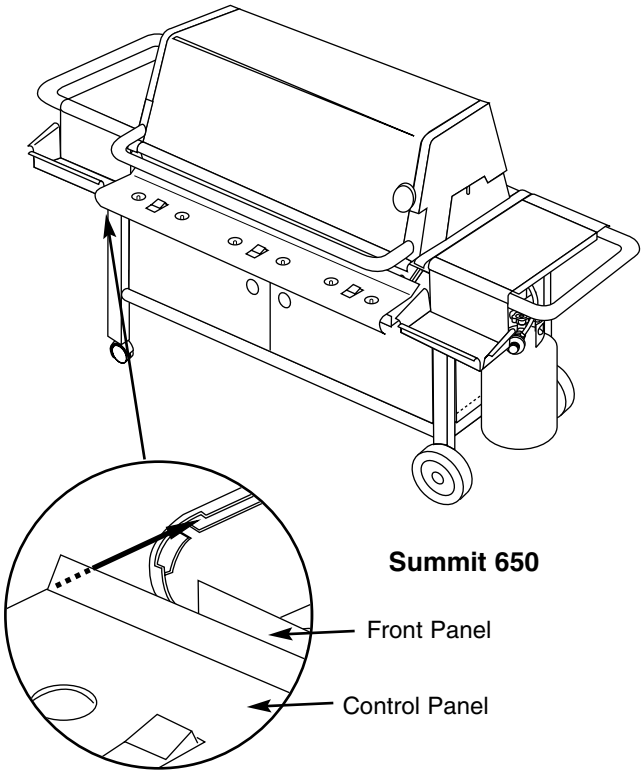


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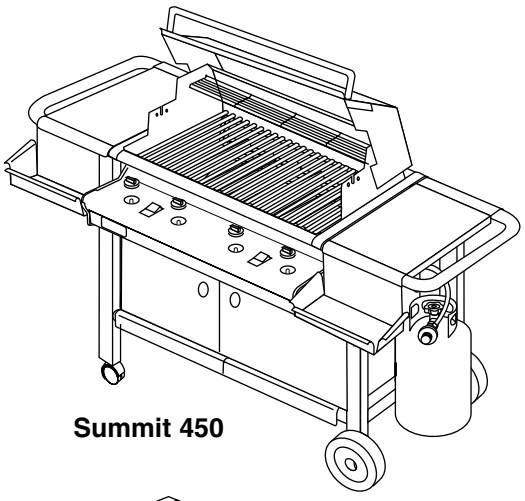
# REINSTALL BURNER CONTROL KNOBS

You will need: four burner control knobs.

Push on the burner control knobs.



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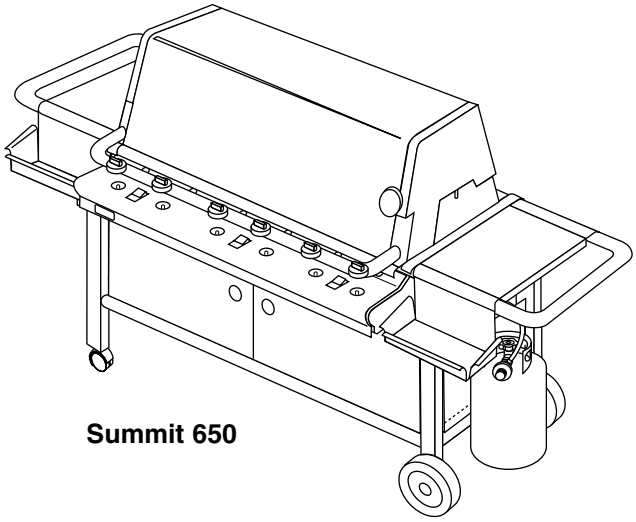

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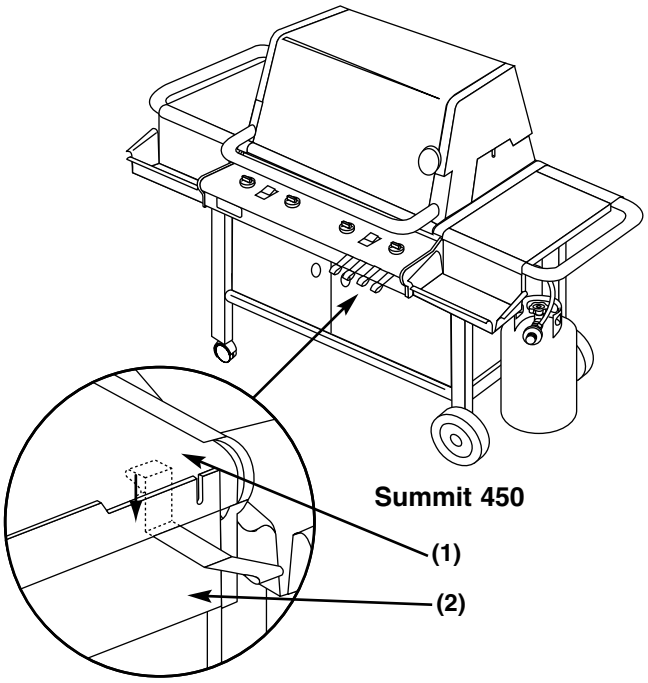
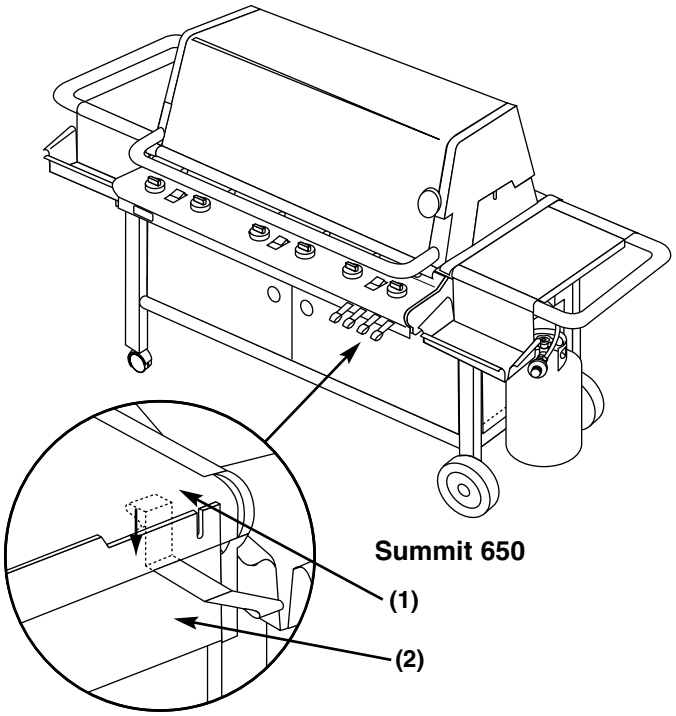
# INSTALL TOOL HOLDERS

You will need: four tool holders.

Place the tool holder under the control panel(1) and over the front panel(2). Set the tool holder on top of the front panel(2) and slide to the left.




# REFER TO OPERATING GUIDE BEFORE LIGHTING BARBECUE

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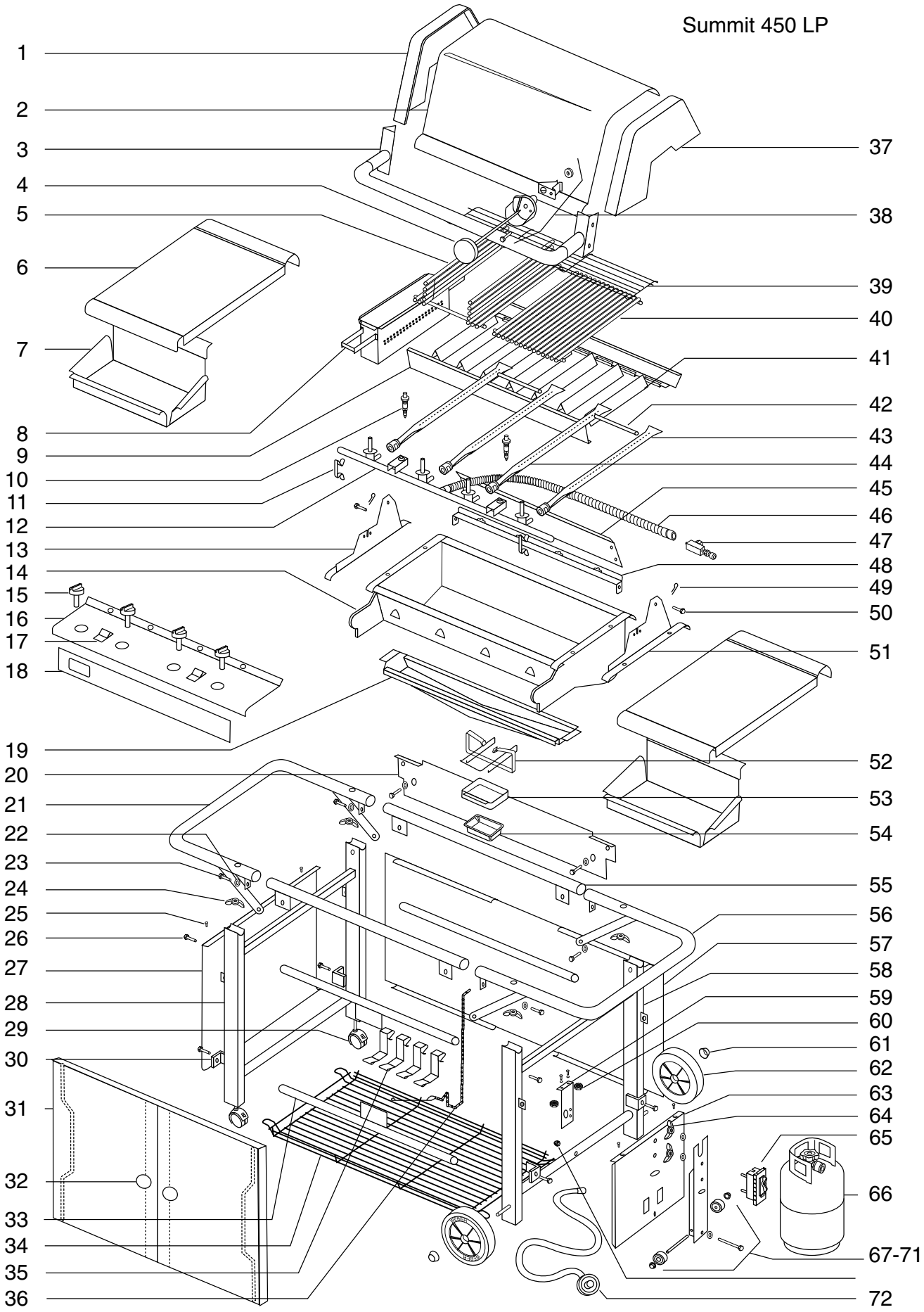
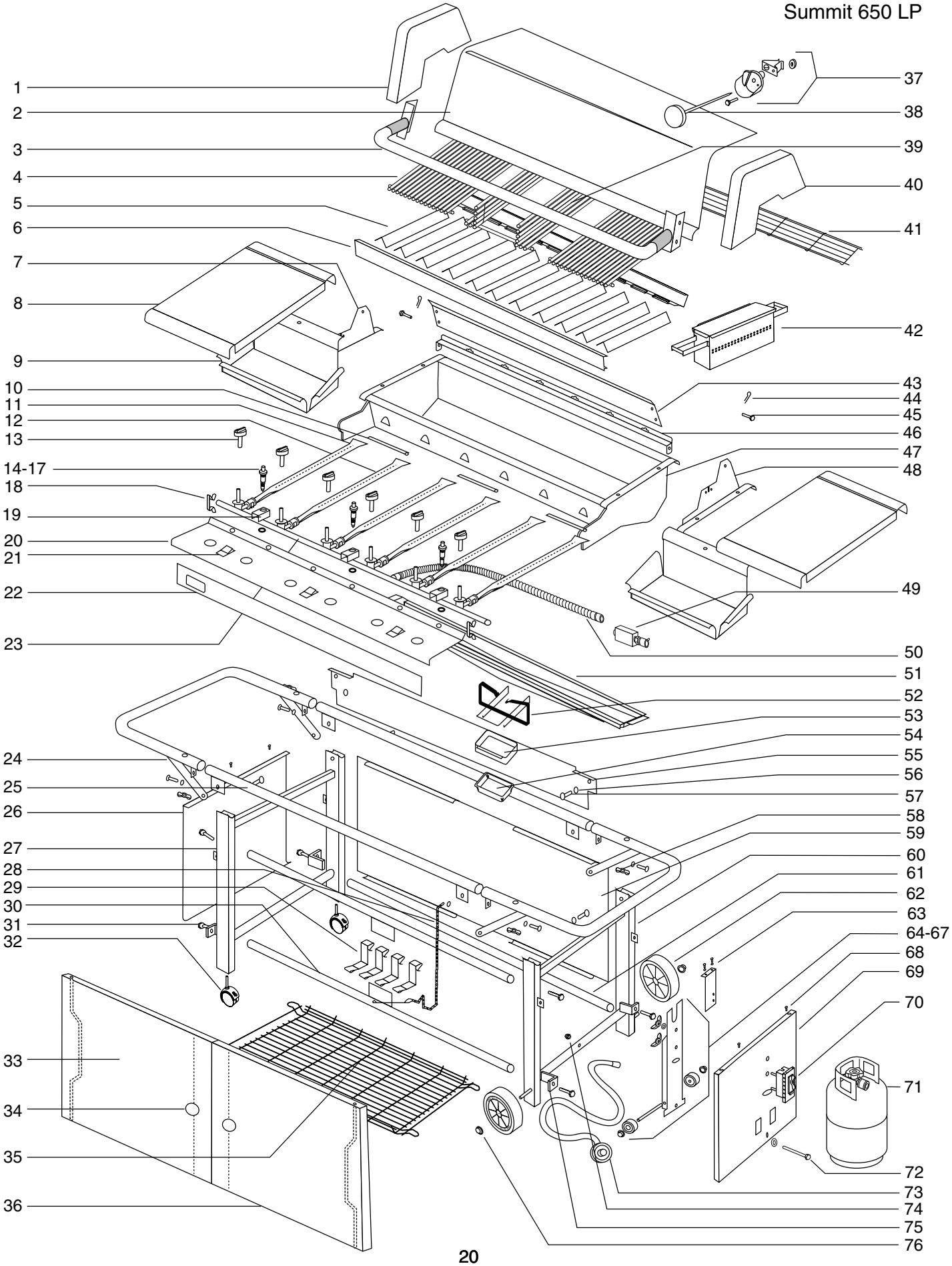


## Summit 450 LP

1 Left pivoting endcap
2 Shroud assembly
3 Stainless steel handle
4 Thermometer
5 Hinged cooking grate
6 Stainless steel work surface (2)
7 Condiment holder (2)
8 Steam-N-Chips smoker
9 Flavorizer bar / cooking grate holder (2)
10 Igniter (2)
11 Manifold mounting clips (2)
12 Manifold assembly
13 Left fixed endcap
14 Cookbox assembly
15 Burner control knob (4)
16 Control panel
17 Igniter button (2)
18 Front panel
19 Bottom tray
20 Back panel
21 Left "U" rail
22 Nylon washer (24)
23 1/4-20 x 1/2 inch bolt (14)
24 1/4-20 wing nut (4)
25 Plastic button (2)
26 1/4-20 x 3 1/2 inch bolt (6)
27 Left panel
28 Caster frame
29 Caster (2)
30 Frame support (2)
31 Left front door
32 Door knob (2)
33 Bottom connector with bushing (2)
34 Accessory rack
35 Tool holder (4)
36 Match holder and chain
37 Right pivoting endcap
38 Thermometer mount assembly
39 Warm-up rack
40 Cooking grate
41 Flavorizer bar (7)
42 Crossover tube (2)
43 Right burner (2)
44 Left burner (2)
45 Rear shroud
46 Corrugated gas line
47 T-assembly
48 Burner tube rest
49 Hair pin cotter (2)
50 Clevis pin (2)
51 Right fixed endcap
52 Catch pan holder
53 Catch pan kit
54 Disposable drip pan
55 Frame rail (2)
56 Right "U" rail
57 Rear panel
58 Wheel frame
59 Regulator mounting bracket
60 1/4-20 keps nut (2)
61 Wheel hubcap (2)
62 Wheel (2)
63 Right panel
64 1/4-20 wing nut (2)
65 Tank scale assembly
66 LP tank
67 Cylinder glide (2)
68 Glide axle
69 Glide hubcap
70 Cylinder panel
71 1/4-20 x 1 3/4 inch bolt
72 Hose / regulator

**⚠WARNING: Use only Weber factory authorized parts. The use of any part that is not factory authorized can be dangerous. This will also void your warranty.**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## Summit 650 LP

1 Left pivoting endcap
2 Shroud assembly
3 Stainless steel handle
4 Cooking grates (2)
5 Flavorizer bars(11)
6 Flavorizer bars/Cooking grate holder (2)
7 Left fixed endcap
8 Stainless steel work surface (2)
9 Condiment holder (2)
10 Crossover tube (3)
11 Left burner (3)
12 Right burner (3)
13 Burner control knob (6)
14 Igniter (3)
15 Igniter lock nut (3)
16 Igniter wire (black) (3)
17 Igniter wire (white) (3)
18 Manifold mounting clips (2)
19 Gas catcher ignition chamber (3)
20 Control panel
21 Igniter button (3)
22 Front panel
23 Manifold assembly
24 "U" rail (2)
25 Frame rail (2)
26 Left panel
27 Caster frame
28 Match holder and chain
29 Tool holder (4)
30 Bottom connector with bushing (2)
31 1/4-20 x 3 1/2 inch bolt (6)
32 Caster (2)
33 Left front door
34 Door knob (2)
35 Accessory rack
36 Right front door
37 Thermometer mount assembly
38 Thermometer
39 Hinged cooking grate
40 Right pivoting endcap
41 Warm-up rack
42 Steam-N-Chips smoker
43 Rear shroud
44 Hair pin cotter (2)
45 Clevis pin (2)
46 Burner tube rest
47 Cookbox assembly
48 Right fixed endcap
49 T-assembly
50 Corrugated gas line
51 Bottom tray
52 Catch pan holder
53 Catch pan kit
54 Disposable drip pan
55 Rear panel
56 Nylon washers (22)
57 1/4-20 x 1/2 inch bolt (14)
58 1/4-20 wing nut (5)
59 Back panel
60 Wheel frame
61 Bottom connector
62 Wheel (2)
63 Regulator mounting bracket
64 Cylinder glide (2)
65 Glide axle
66 Glide hubcap
67 Cylinder panel
68 Plastic button (4)
69 Right panel
70 Fuel Scale
71 Liquid Propane Cylinder
72 1/4 x 20 x 1 3/4 inch bolt
73 Hose/regulator
74 1/4 x 20 keps nut
75 Frame support (4)
76 Wheel hubcap (2)

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